

# ANSWERS

## Chapter 1

### Lesson 1.1

1. 14   2. 5   3. 4   4. 8   5. 9   6. 24
7. \$10   8. \$4.90   9. 4.5 hours
10. 350 miles per hour

### Lesson 1.2

1. 1000   2. 32   3. 25   4. 1296   5. 729
6. 243   7. 343   8. 133   9. 20   10. 100
11. 100 ft<sup>2</sup>   12. 216 in.<sup>3</sup>   13. 27.04 cm<sup>2</sup>
14. 42.875 ft<sup>3</sup>

### Lesson 1.3

1. 16   2. 8   3. 11   4. 15   5. 8   6. 5
7. 3   8. 36   9. 9   10. \$157

### Lesson 1.4

1. 3 is not a solution.   2. 3 is not a solution.
3. 2 is not a solution.   4. 12 is a solution.
5. 5 is not a solution.   6. 3 is a solution.
7. 5 is not a solution.   8. 3 is not a solution.
9. 2 is a solution.   10. What number plus 7 gives 21? The number is 14.   11. One more than three times what number gives 19? The number is 6.   12. What number minus 12 gives 10? The number is 22.   13. What number divided by 3 gives 11? The number is 33.   14. Seven less than 4 times what number gives 9? The number is 4.
15. What number divided by 2 gives 4? The number is 8.

### Lesson 1.5

1.  $\frac{1}{2}x - 8$    2.  $x - 5$    3.  $10x$
4.  $7^2 + x$    5.  $\frac{x}{16}$    6.  $x - 2$

7. a. 

Price per hat
---------------

 $\cdot$ 

Number of hats
----------------

 = 

Total receipts
----------------

- b. Price per hat = 8 (dollars)  
 Number of hats =  $n$  (hats)  
 Total receipts = 2480 (dollars)

- c. 310 hats

$$8n = 2480$$

8. a. 

Cost per person
-----------------

 $\cdot$ 

Number of persons
-------------------

 = 

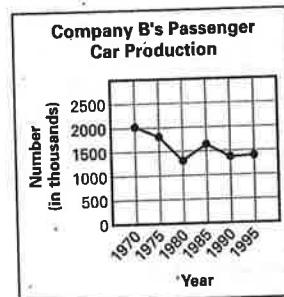
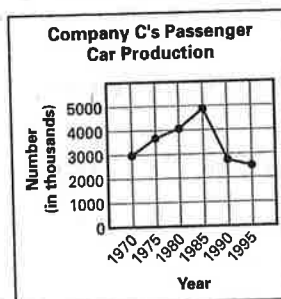
Total cost
------------

- b. Cost per person = 7.50 (dollars)  
 Number of persons = 3 (persons)  
 Total cost =  $n$  (dollars)  
 $7.50(3) = n$

- c. \$22.50

### Lesson 1.6

1. 1990–1995   2. 1970–1975
3. 1985–1990   4. 1980–1985



### Lesson 1.7

1. The table represents a function. For each input, there is exactly one output.
2. The table does not represent a function. For the input value 2, there are two output values, not one.

3.

Input $x$	Output $y$
0	5
1	4
2	3
3	2

4.

Input $x$	Output $y$
0	-1
1	3
2	7
3	11

5.

Input $x$	Output $y$
0	2
1	1
2	0
3	-1

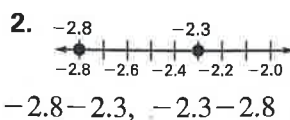
6.  $C = 1.5 + 4p$

# Chapter 1 continued

7.  $C = 3 + 2.50p$

## Chapter 2

### Lesson 2.1



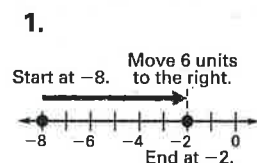
4.  $-3, -2.5, -1.5, 2, 4.5$  5.  $-2, -\frac{5}{4}, -\frac{3}{4}, \frac{1}{4}, 1$

6.  $1.7, 1.7$  7.  $-4.2, 4.2$  8.  $5, 5$

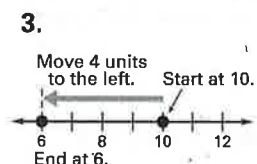
9. The speed is 150 miles per hour. The velocity is  $-150$  miles per hour.

10. The speed is 17 feet per second. The velocity is  $-17$  feet per second.

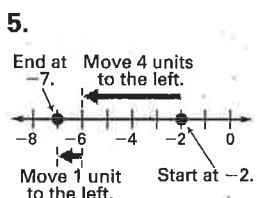
### Lesson 2.2



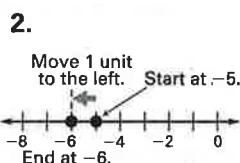
The sum is 2.



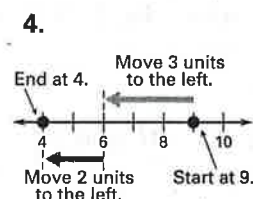
The sum is 6.



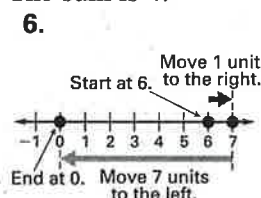
The sum is  $-7$ .



The sum is  $-6$ .



The sum is 4.



The sum is 0.

7. commutative property 8. identity property

9. associative property 10. property of zero

11. Yes, the store made a profit.

$$342.60 + (-78.35) + (-127.40) + 457.80 = 594.65; \text{ the profit for the year was } \$594.65$$

12. The overall change in the price of a share of the stock is  $-\$0.25$ .

### Lesson 2.3

1.  $-3$  2.  $-12$  3.  $-1.5$  4.  $1.5$  5.  $8$

6.  $12$  7.  $1$  8.  $18$  9.  $-13$  10.  $7, -4x$

11.  $-y, -5$  12.  $-2a, 1$

13.

Week	Amount	Change
1	9	—
2	6.5	$-2.5$
3	11	$4.5$
4	14	3

### Lesson 2.4

1. Law Firm Personnel

Attorneys Paralegals

$$\begin{matrix} \text{Males} & \begin{bmatrix} 3 & 4 \end{bmatrix} \\ \text{Females} & \begin{bmatrix} 4 & 5 \end{bmatrix} \end{matrix}$$

2. Car Rental Reservations

$$\begin{matrix} & \text{Budget} & \text{Luxury} \\ \text{Sedans} & \begin{bmatrix} 26 & 47 \end{bmatrix} \\ \text{Convertibles} & \begin{bmatrix} 3 & 8 \end{bmatrix} \\ \text{Sport Utility} & \begin{bmatrix} 5 & 9 \end{bmatrix} \end{matrix}$$

3.  $\begin{bmatrix} 5 & -4 \\ 6 & 4 \end{bmatrix}$  4.  $\begin{bmatrix} -2.5 & 2.5 \\ 5 & 6 \end{bmatrix}$

### Lesson 2.5

1.  $-6$  2.  $7$  3.  $-20$  4.  $18$  5.  $-40$

6.  $-72$  7.  $-5w$  8.  $8t^2$  9.  $-7y^2$

10.  $-2x$  11.  $-4a^3$  12.  $6s^2$  13.  $-45$

14.  $5$  15.  $-26$  16.  $-27$  17.  $\$384$

18.  $\$462.50$

### Lesson 2.6

1.  $-3h - h^2$  2.  $-21 - 6y$  3.  $-20q - 28$

4.  $-6s + 48$  5.  $-x^2 - x$  6.  $5p - 10$

7.  $13x$  8.  $3y$  9.  $t^3 - 4$  10.  $n + 4$

11.  $-10a$  12.  $11d - 3$  13.  $-5w - 12$

14.  $-4q + 15$  15.  $-9t^2 + 36t - 12$

# Chapter 2 continued

16.  $-x^2 - 14x$  17. 5 18.  $11d^2 + 8d$

## Lesson 2.7

1. -12 2. 4 3. -0.5 4. -8 5.  $\frac{1}{15}$

6. -5 7.  $-5 + 2y$  8.  $-2 + \frac{x}{2}$

9.  $-6a - 10$  10. 1 11. 2 12. 2 13. 9

## Lesson 2.8

1. 0.25 2. 0.64 3.  $\frac{3}{3} = \frac{1}{1}$  4.  $\frac{2}{7}$  5.  $\frac{2}{4} = \frac{1}{2}$

6.  $\frac{0.25}{0.75} = \frac{1}{3}$  7.  $\frac{0.53}{0.47} = \frac{53}{47}$

## Chapter 3

### Lesson 3.1

1. 15 2. -1 3. 13 4. -9 5. 16 6. -6  
7. -7 8. 9 9. 14 10. \$275

### Lesson 3.2

1.  $-\frac{1}{2}$  2.  $\frac{1}{6}$  3. 7 4. -12 5. 21 6. 18  
7.  $s(2.5) = 800; 320$  miles per hour  
8.  $340t = 1530; 4.5$  hours

### Lesson 3.3

1. -2 2. 1 3. 24 4. 2 5. -4 6. 2.5  
7.  $3 + 1.5n = 12; 6$  8.  $6 + 2.5h = 16; 4$

### Lesson 3.4

1. 0.5 2. -2 3. -1 4. no solution  
5. all values of  $f$  are solutions 6. -0.5  
7. 40 8. 55

### Lesson 3.5

1. 2.75 in. 2.  $3x = 9$  hours

### Lesson 3.6

1. 3.21 2. 0.03 3. 6.44 4. -19.37  
5.  $58 + 32x = 34x - 167; 112.5$   
6.  $-83y + 17 = 72y; 0.11$  7. \$13.91  
8. \$11.66

## Lesson 3.7

1.  $h = \frac{2A}{b}$  2.  $r = \frac{C}{2\pi}$  3.  $P = \frac{I}{rt}$  4.  $r = \frac{I}{Pt}$

5.  $y = 7x + 8; -6; 1; 8; 15$

6.  $y = 0.5x + 2; 1; 1.5; 2; 2.5$

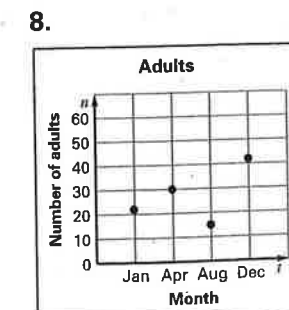
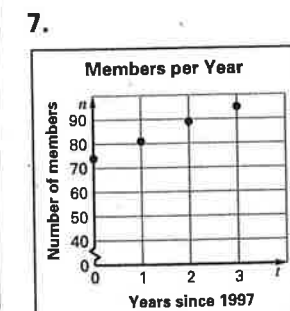
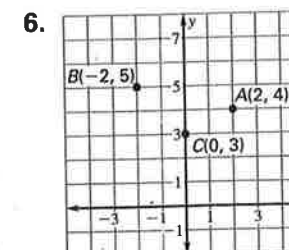
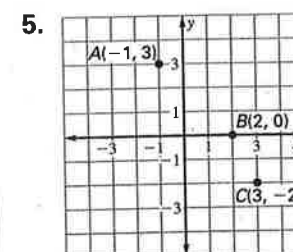
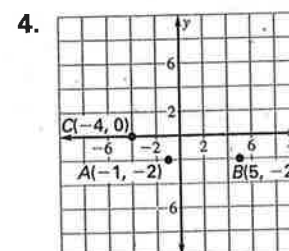
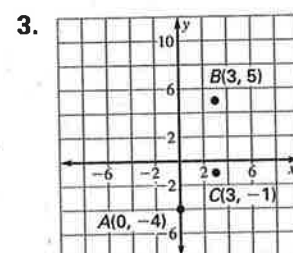
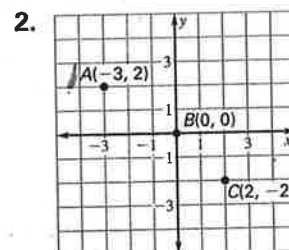
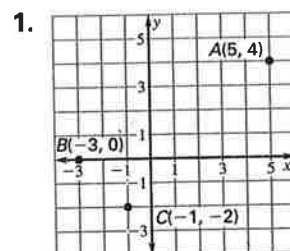
7.  $y = 5x + 1; -9; -4; 1; 6$

## Lesson 3.8

1. about 284 marks 2. about 2665 schillings  
3. about 190 4. about 310 5. 8% 6. 19%

## Chapter 4

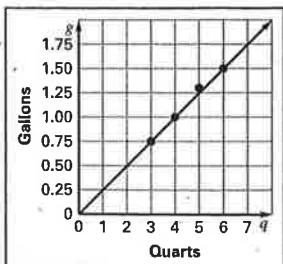
### Lesson 4.1





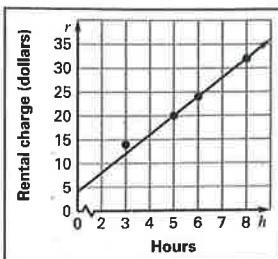
# Chapter 4 continued

9.



Data is incorrect.  
Five quarts should be 1.25 gallons.

10.



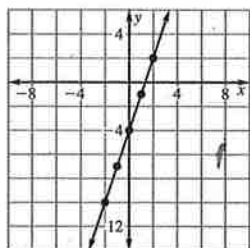
Data is incorrect.  
Rental charge should be \$12 for 3 hours.

## Lesson 4.2

1.  $(-4, 0)$  is a solution.
2.  $(2, 1)$  is not a solution.
3.  $(3, 1)$  is a solution.
4.  $(-2, 2)$  is not a solution.

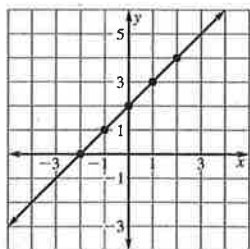
5.

Choose $x$ .	-2	-1	0	1	2
Evaluate $y$ .	-10	-7	-4	-1	2



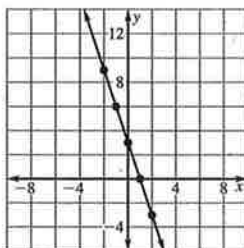
6.

Choose $x$ .	-2	-1	0	1	2
Evaluate $y$ .	0	1	2	3	4

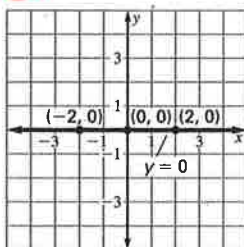


7.

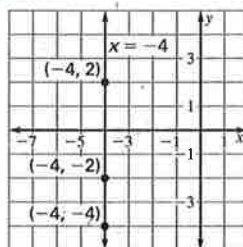
Choose $x$ .	-2	-1	0	1	2
Evaluate $y$ .	9	6	3	0	-3



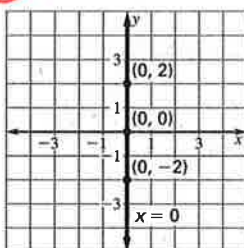
8.



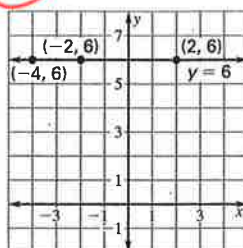
9.



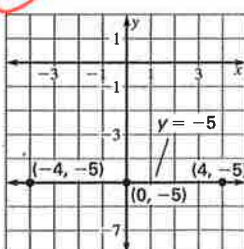
10.



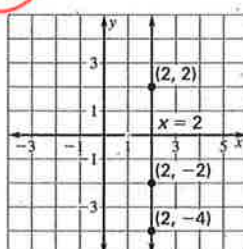
11.



12.



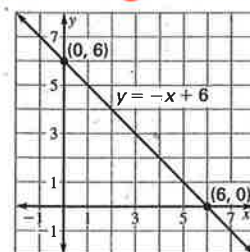
13.



## Lesson 4.3

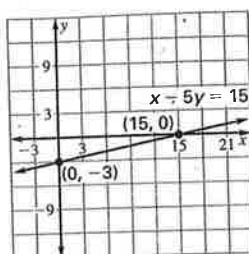
1. 6
2. 2
3. 2
4. -6
5. -4
6. -3

7. The  $x$ -intercept is 6 and the  $y$ -intercept is 6.

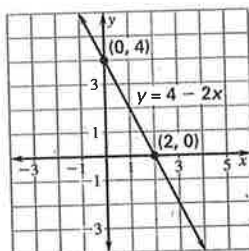


## Chapter 4 continued

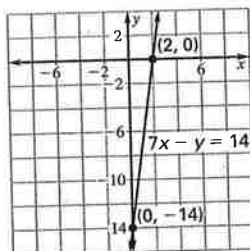
8. The  $x$ -intercept is 15 and the  $y$ -intercept is  $-3$ .



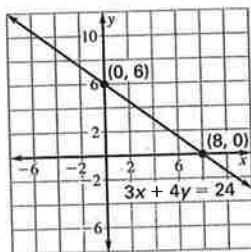
9. The  $x$ -intercept is 2 and the  $y$ -intercept is 4.



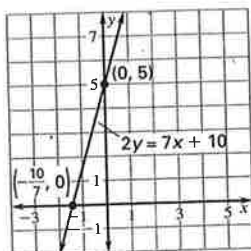
10. The  $x$ -intercept is 2 and the  $y$ -intercept is  $-14$ .



11. The  $x$ -intercept is 8 and the  $y$ -intercept is 6.

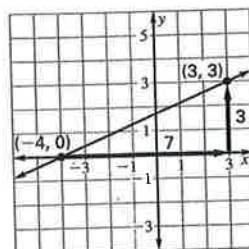


12. The  $x$ -intercept is  $-\frac{10}{7}$  and the  $y$ -intercept is 5.

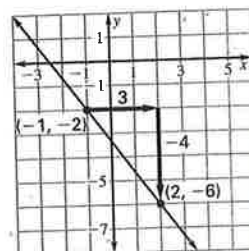


## Lesson 4.4

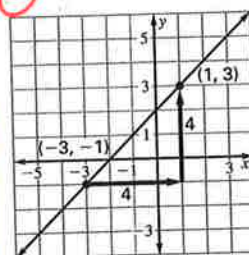
1.  $m = \frac{3}{7}$



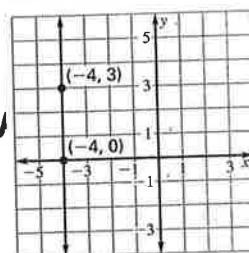
2.  $m = \frac{-4}{3} = -\frac{4}{3}$



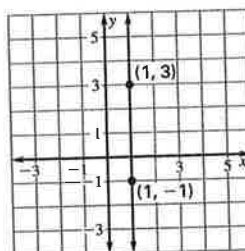
3.  $m = 1$



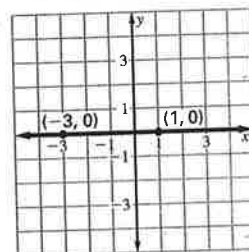
4. The slope is undefined.



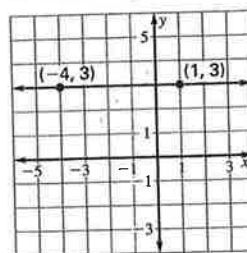
5. The slope is undefined.



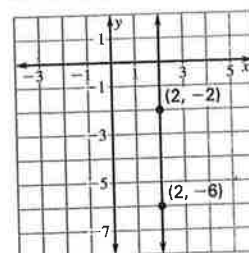
6. The slope is 0.



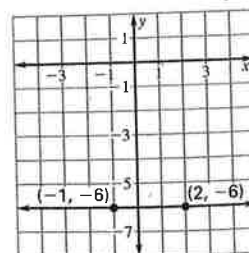
7. The slope is 0.



8. The slope is undefined.



9. The slope is 0.



# Chapter 4 continued

10. The rate of change is  $\frac{1,731,000}{3} = 577,000$  people per year.

11. The rate of change is  $\frac{-0.5}{6} \approx -0.08$  million registered motorcycles per year

## Lesson 4.5

1.  $y = 5x$  2.  $y = 0.5x$  3.  $y = x$

4.  $y = -0.2x$  5.  $y = 2x$  6.  $y = \frac{-x}{3}$

7. 45.6 lb 8. about 163.2 lb

9. a.  $E \approx \frac{160}{139}V$  b. about 169.4 lb

## Lesson 4.6

Slope-intercept form      Slope      y-intercept

1.  $y = -3x + 0$        $m = -3$        $b = 0$

2.  $y = -x + 5$        $m = -1$        $b = 5$

3.  $y = -3x + 5$        $m = -3$        $b = 5$

4.  $y = -\frac{1}{3}x + \frac{7}{3}$        $m = -\frac{1}{3}$        $b = \frac{7}{3}$

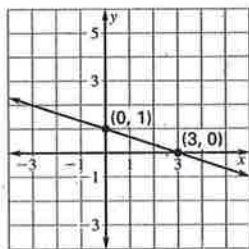
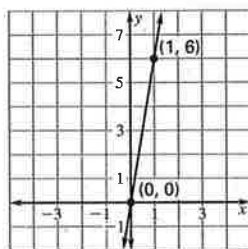
5.  $y = 0x + 2$        $m = 0$        $b = 2$

6.  $y = -\frac{1}{4}x + 1$        $m = -\frac{1}{4}$        $b = 1$

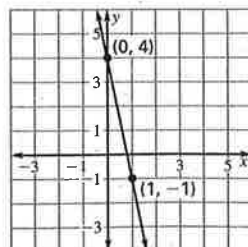
7.  $y = -3x$  and  $3x + y = 5$ ; they have the same slope,  $-3$ .

8.  $y = 6x$

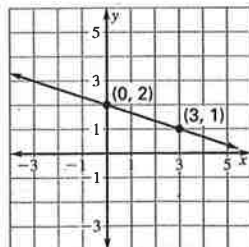
9.  $y = -\frac{1}{3}x + 1$



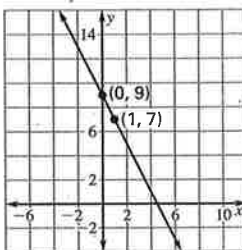
10.  $y = -5x + 4$



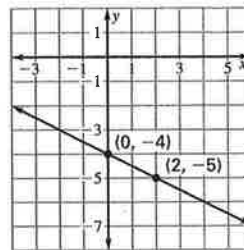
11.  $y = -\frac{1}{3}x + 2$



12.  $y = -2x + 9$



13.  $y = -\frac{1}{2}x - 4$

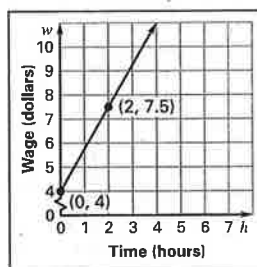


14. a.  $w = 1.75h + 4$

b. The slope is 1.75 and the y-intercept is 4.

c. The slope represents the hourly rate.

d.

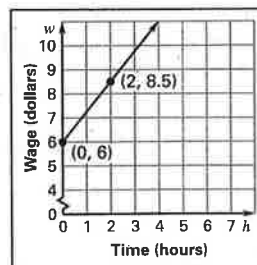


15. a.  $w = 1.25h + 6$

b. The slope is 1.25 and the y-intercept is 6.

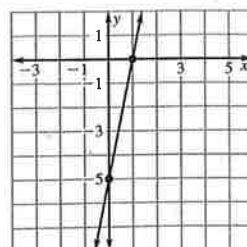
c. The slope represents the hourly rate.

d.

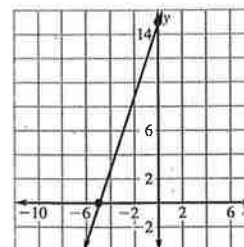


## Lesson 4.7

1. 1



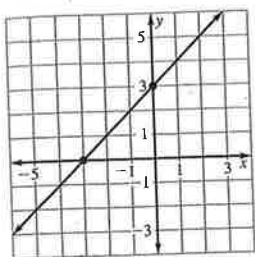
2.  $-5$



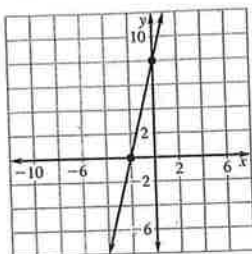


## Chapter 4 continued

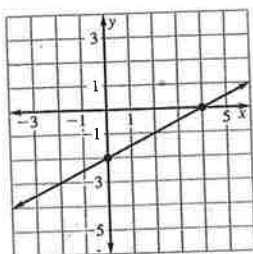
3. -3



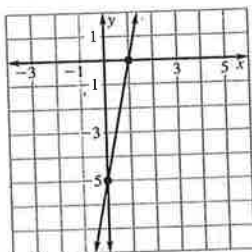
4. -2



5. 4



6. 1



7. The United States will have a consumer price index of 180.4 in the year 2002.

### Lesson 4.8

1. The relation is not a function. 2. The relation is a function. The domain is the set of input values 1, 2, 3, and 4. The range is the set of output values 1, 4, 9, and 16. 3. The relation is a function. The domain is the set of input values 1, 2, 3, and 4. The range is the set of output values 4, 6, and 8.

4.  $f(3) = 29; f(0) = 2; f(-2) = -16$

5.  $f(3) = 5.5; f(0) = 4; f(-2) = 3$

6.  $f(3) = -18; f(0) = 3; f(-2) = 17$

7.  $f(t) = 340t; f(1.5) = 510$  miles

8.  $f(t) = 380t; f(1.5) = 570$  miles

## Chapter 5

### Lesson 5.1

1.  $y = -2x + 5$  2.  $y = x - 4$  3.  $y = 2$

4.  $y = 3x + 6$

5.  $C = 50 + 0.30n$

Miles ( $n$ )	50	100	200	300
Total charge ( $C$ )	65	80	110	140

6. a.  $E = 1400 + 30t$  b. 1580

### Lesson 5.2

1.  $y = -2x - 4$  2.  $y = 4x + 10$

3.  $y = -x + 9$  4.  $y = 4x - 5$

5.  $y = x + 3$  6.  $y = -2x + 1$  7. \$12.75

### Lesson 5.3

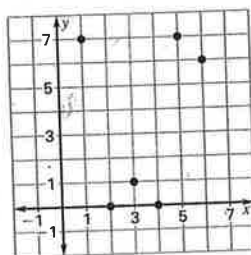
1.  $y = x + 5$  2.  $y = -8x + 7$

3.  $y = 3x + 3$  4.  $y = -\frac{1}{2}x + 5$

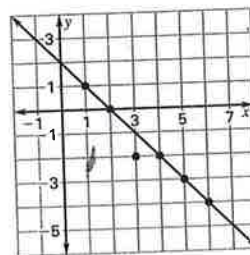
5.  $y = 3x - 14$  6.  $y = \frac{1}{4}x + 2$

### Lesson 5.4

1.



2.



no best-fitting line

$y = -x + 2$

3. negative correlation 4. no correlation

### Lesson 5.5

1.  $y = 2x - 3$  2.  $y = -3x + 3$

3.  $y = -4x$  4. 8:50 A.M. 5.  $d = -\frac{1}{6}t + 10$

### Lesson 5.6

1.  $2x - 3y = 21$  2.  $2x - y = -8$

3.  $x + 4y = 24$  4.  $2x + y = 6$

5.  $3x - y = -10$  6.  $x + y = 3$

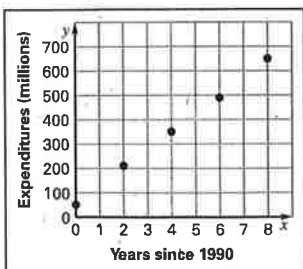
Peaches (lb), $x$	0	2	4	8
Blueberries (lb), $y$	3	2.25	1.5	0

### Lesson 5.7

1. not reasonable to be represented by a linear model 2. reasonable to be represented by a linear model

# Chapter 5 continued

3. a.



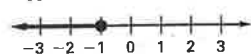
b. Sample answer:  $y = 75x + 50$

4. Sample answer: \$125 million

## Chapter 6

### Lesson 6.1

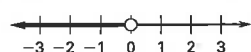
1.



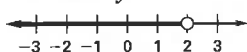
2.



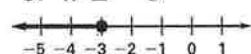
3.



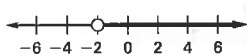
4.  $2 > y$



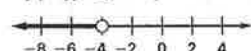
5.  $x \leq -3$



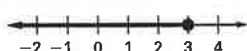
6.  $k > -2$



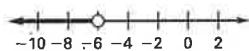
7.  $x < -4$



8.  $a \leq 3$



9.  $t < -6$



### Lesson 6.2

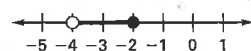
1.  $x > 1$  2.  $m \leq 2$  3.  $y \geq -1$  4.  $a > -3$

5.  $x \geq 6$  6.  $y \leq 6$  7. at least 44 hours

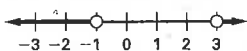
8. at least 47 hours

### Lesson 6.3

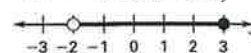
1.  $-4 < x \leq -2$ ;



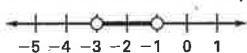
2.  $x > 3$  or  $x < -1$ ;



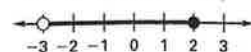
3.  $-2 < x \leq 3$ ;



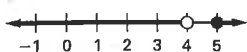
4.  $-3 < x < -1$ ;



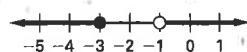
5.  $2 \geq x > -3$ ;



6.  $x < 4$  or  $x \geq 5$ ;



7.  $x > -1$  or  $x \leq -3$



8.  $172,000 \leq v \leq 226,000$

### Lesson 6.4

1. 8, -8 2. -1, 7 3. -3, 6 4.  $1 < x < 5$

5.  $-11 \leq x \leq -5$  6.  $0.5 < x < 2.5$

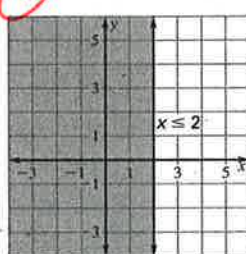
7.  $x \leq -3$  or  $x \geq -1$  8.  $x \leq 2$  or  $x \geq 6$

9.  $x < -2$  or  $x > 1$

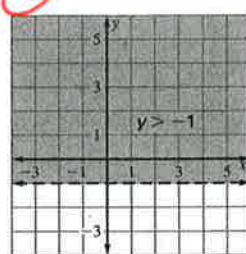
### Lesson 6.5

1. (0, 0) is not a solution; (-1, -2) is a solution. 2. (2, 2) is a solution; (-2, 2) is not a solution.

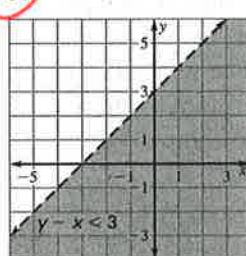
3.



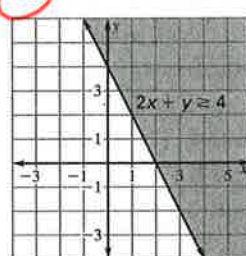
4.



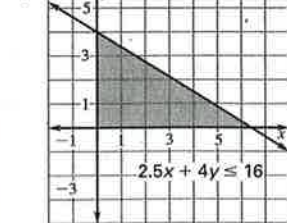
5.



6.



7.



### Lesson 6.6

1. 2 8 10 13 16 22

28 31 35 35 50 56

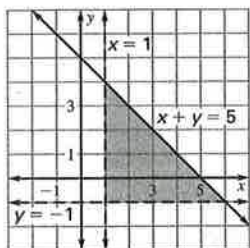


# Chapter 7 continued

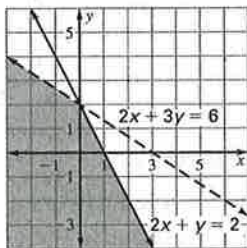
4. a. Infinitely many; because  $0 = 0$  is a true statement, the system has infinitely many solutions.  
 b. Infinitely many; because the lines coincide, the system has infinitely many solutions.
5. a. Infinitely many; because  $0 = 0$  is a true statement, the system has infinitely many solutions.  
 b. Infinitely many; because the lines coincide, the system has infinitely many solutions.
6. a. Infinitely many; because  $0 = 0$  is a true statement, the system has infinitely many solutions.  
 b. Infinitely many; because the lines coincide, the system has infinitely many solutions.
7. The price of one sketchpad is \$3.

## Lesson 7.6

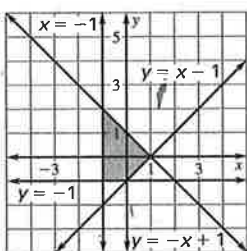
1.



2.



3.



4.  $x \geq 0, y \geq 0, 18x + 9y \leq 90$   
 5.  $x \geq 0, y \geq 0, 16x + 8y \leq 72$

## Chapter 8

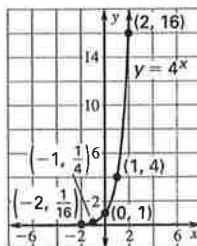
### Lesson 8.1

1.  $m^2$  2.  $6^5$  3.  $y^7$  4.  $3^6$  5.  $w^{21}$  6.  $7^{15}$   
 7.  $t^{12}$  8.  $(-2)^6$  9.  $125x^3$  10.  $100s^2$   
 11.  $x^4$  12.  $-27y^3$  13.  $\frac{9}{1}$

### Lesson 8.2

1. 1 2. 2 3.  $\frac{1}{13x}$  4.  $\frac{1}{13y}$  5.  $16x^4$   
 6.  $\frac{d}{16c^4}$  7. 1 8. 16 9.  $\frac{1}{625}$

10.



### Lesson 8.3

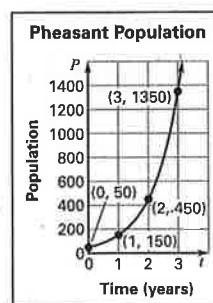
1.  $10^3 = 1000$  2.  $\frac{1}{3}$  3.  $y^6$  4.  $\frac{16}{x^{12}}$  5.  $z^4$   
 6.  $\frac{25y^4}{w^2}$  7.  $\left(\frac{1}{2}\right)^6 = \frac{1}{2^6} = \frac{1}{64} \approx 0.0156$

### Lesson 8.4

1. 9,332,000 2. 0.278 3. 450,000  
 4.  $7.52 \times 10^1$  5.  $1.35667 \times 10^5$   
 6.  $8.8 \times 10^{-4}$  7.  $1.265 \times 10^3$   
 8.  $8.0 \times 10^{-3}$  9.  $\approx 4.0 \times 10^2$

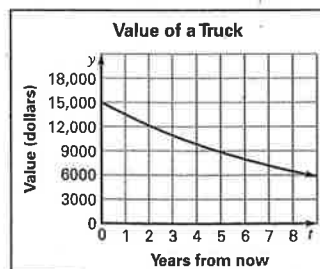
### Lesson 8.5

1. \$472.78 2. \$927.42 3. 1350 pheasants  
 4.



### Lesson 8.6

1. \$9886 2. \$8368 3.  $y = 15,000(0.90)^t$   
 4. \$7698 5.



# Chapter 9

## Chapter 9

### Lesson 9.1

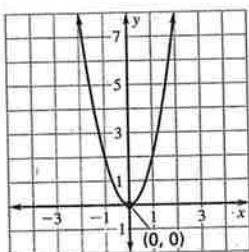
1. 0.3 2. 6 3. -5 4.  $\pm 10$  5. 0 6. 3  
7.  $\pm 3$  8.  $\pm \sqrt{3}$  9.  $\pm 7$

### Lesson 9.2

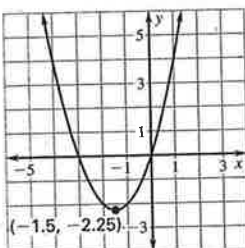
1.  $7\sqrt{2}$  2.  $2\sqrt{13}$  3.  $10\sqrt{3}$  4.  $3\sqrt{11}$   
5.  $\frac{\sqrt{11}}{2}$  6.  $\frac{\sqrt{2}}{6}$  7.  $\frac{\sqrt{5}}{3}$  8.  $\frac{\sqrt{3}}{4}$   
9. 70 meters per second

### Lesson 9.3

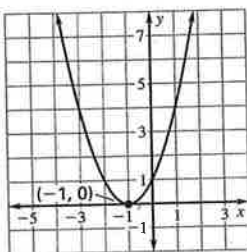
1.



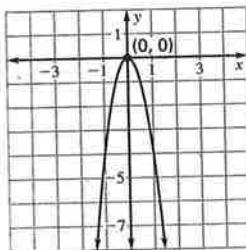
2.



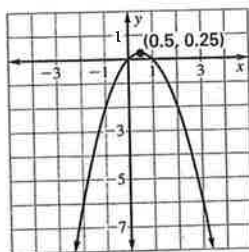
3.



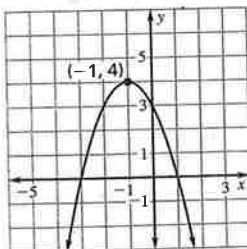
4.



5.



6.



7. 25 feet

### Lesson 9.4

1.  $\pm 6$  2.  $\pm 4$  3.  $\pm 3$  4. -4, 3 5. 2, 3  
6. -1, 6 7.  $-0.63(5)^2 + 15.08(5) + 151.57 = 211.22 \approx 210$

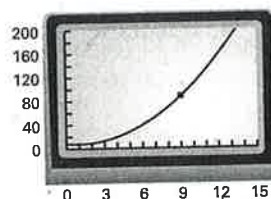
### Lesson 9.5

1. 1, 3 2. -5, -4 3. -3, 2  
4. 1.25 seconds

### Lesson 9.6

1. one solution 2. two solutions  
3. no real solution 4. one solution  
5. no real solution 6. two solutions  
7. The value of the discriminant is 701.1084, so the company's revenue will reach \$150 million.

8.

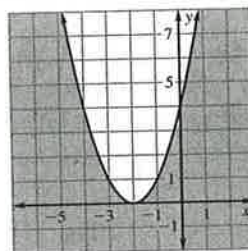


From the graph, you can see that the revenue will reach \$90 million in about 9 years.

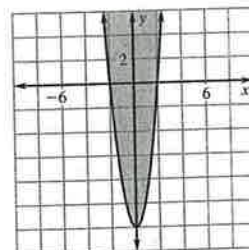
### Lesson 9.7

1. (2, 0) is a solution 2. (1, -1) is a solution  
3. (2, -3) is not a solution

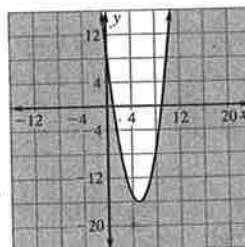
4.



5.

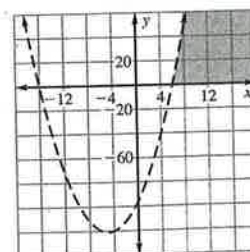


6.



7. Answers will vary. *Sample answer:* Two possible scenarios are a width of 10 feet and a length of 14 feet or a width of 16 feet and a length of 20 feet.

8.  $x^2 + 10x - 96 > 0$

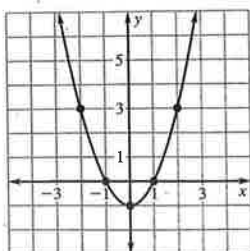


So, the width should be greater than 6 feet and the length greater than 16 feet.

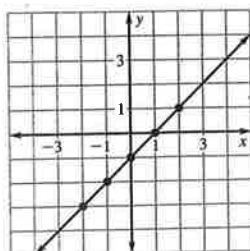
# Chapter 9 continued

## Lesson 9.8

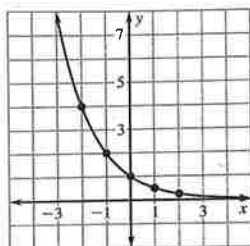
1. quadratic



2. linear



3. exponential



4. quadratic

## Chapter 10

### Lesson 10.1

1.  $-3x^2 - x + 2$  2.  $-4x^2 + 9x - 8$
3.  $8x^2 - 2x - 1$  4.  $-7x^2 + 3x - 3$
5.  $N = 189t^2 - 983t - 307$

### Lesson 10.2

1.  $2x^2 + 5x + 3$  2.  $y^2 - 5y + 6$
3.  $6a^2 + a - 2$  4.  $a^3 + 2a^2 - 5a + 12$
5.  $2y^3 + 3y^2 - 9y - 5$
6.  $a^3 + 2a^2 - 5a + 12$
7.  $2y^3 + 3y^2 - 9y - 5$  8.  $3x^2 + 11x + 6$

### Lesson 10.3

1.  $x^2 - 25$  2.  $9x^2 - 4$  3.  $x^2 - 4y^2$
4.  $m^2 + 2mn + n^2$  5.  $9x^2 - 12x + 4$
6.  $49y^2 + 28y + 4$  7.  $x^2 + 10x + 25$
8.  $x^2 - 9$

### Lesson 10.4

1. 6, -6 2. 5, 1 3. -4, -3 4. 5 5. -3
6. -2 7. -3; -1; (-2, -1)
8. 2; 4; (3, -1) 9. 1; -5; (-2, -9)

## Lesson 10.5

1.  $(x + 3)(x + 2)$  2.  $(x + 1)(x + 5)$
3.  $(x + 2)(x + 1)$  4.  $(x - 2)(x - 1)$
5.  $(x - 3)(x - 4)$  6.  $(x - 2)(x - 3)$
7.  $(x - 2)(x + 1)$  8.  $(x - 6)(x + 2)$
9.  $(x - 4)(x + 2)$  10. -3, -5
11. 2, 6 12. 1, -4

## Lesson 10.6

1.  $(5x + 1)(x + 2)$  2.  $(2x + 3)(x + 1)$
3.  $(3x + 7)(x + 1)$  4.  $(9x + 2)(x + 7)$
5.  $(6x - 5)(x - 3)$  6.  $(4x + 1)(2x + 9)$
7. -3,  $-\frac{1}{2}$  8.  $3, \frac{2}{5}$  9.  $\frac{2}{3}, -\frac{1}{2}$

## Lesson 10.7

1.  $(4 + 3y)(4 - 3y)$  2.  $(2q + 7)(2q - 7)$
3.  $(6 + 5x)(6 - 5x)$  4.  $(x - 9)^2$
5.  $(2n + 5)^2$  6.  $(4y + 1)^2$  7. 10
8.  $\frac{1}{2}$  9. 4 10.  $\pm 7$  11.  $\pm \frac{8}{3}$  12.  $\pm \frac{9}{2}$

## Lesson 10.8

1.  $8y(3y^2 + 4)$  2.  $6n^3(n^5 - 3)$
3.  $3(a^2 + 10)$  4.  $2y(y + 3)(y - 3)$
5.  $7t^3(t + 1)^2$  6.  $x^2(x - 1)(x - 2)$
7.  $(y^2 - 2)(y + 3)$  8.  $(x^2 + 5)(x + 2)$
9.  $(d^3 + 1)(d - 1)$  10. -1, 5 11. 0, 5, -5
12. -3, 0

## Chapter 11

### Lesson 11.1

1.  $\pm 8$  2. 16 3. 1 4. 24 inches

### Lesson 11.2

1. \$7.20 2. 9 miles 3. 150 grams
4. 50 yards 5. 25% 6. 400% 7. 170

### Lesson 11.3

1.  $y = 1.25x$  2.  $y = \frac{20}{x}$  3. 36 inches
4.  $l = \frac{128}{w}$
5. 64 inches; 32 inches; 8 inches; 6.4 inches